

Mineral Industry Surveys

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SILICON IN SEPTEMBER 1999

In **September**, domestic shipments and overall production of silicon ferroalloys plus metal, excluding silvery pig iron, were estimated to have decreased by about 13% and 8%, respectively, compared with those for the prior month, according to the U.S. Geological Survey. These and the corresponding average daily rates were the lowest of any month for the year to date. Total producer stocks were estimated to have increased slightly.

August trade data are included in this report. Trade data for September were unavailable at the time of publication and will be included in a subsequent report.

As of mid-September, American Silicon Technologies indefinitely suspended its production of silicon metal at Rock Island, WA, because of depressed prices (Ryan's Notes, 1999).

The International Trade Administration of the U.S. Department of Commerce rescinded the antidumping duty orders and countervailing duty order it had issued in 1993 and 1994 on ferrosilicon from Brazil, China, Kazakhstan, Russia, Ukraine, and Venezuela and terminated related administrative reviews of these orders. This action stemmed from the U.S. International Trade Commission's redetermination in August, but did not apply to unliquidated entries of ferrosilicon still subject to a court-ordered

injunction (International Trade Administration, 1999).

Icelandic Alloys Ltd. started up a third, new ferrosilicon furnace, thereby raising the plant's annual ferrosilicon capacity by 40,000 metric tons to more than 100,000 tons (Metal Bulletin 1999a, b).

Published prices for silicon-based commodities are listed below (**Source: Platt's Metals Week**). Ferrosilicon prices are based on the contained weight of silicon. All prices are posted in cents per pound.

References Cited

International Trade Administration, 1999, Ferrosilicon from Brazil, Kazakhstan, People's Republic of China, Russia, Ukraine, and Venezuela: Federal Register, v. 64, no. 182, September 21, p. 51097-51099.

Metal Bulletin, 1999a, Icelandic Alloys furnace set for autumn start: Metal Bulletin, no. 8392, July 12, p. 8.

———1999b, EU sets new ferro-chrome quota: Metal Bulletin, no. 8408, September 13, p. 17.

Ryan's Notes, 1999, Chinese silicon metal prices rise; AST temporarily shuts down: Ryan's Notes, v. 5, no. 38, September 20, p. 1.

Dealer Import Prices

	<u>50% Ferrosilicon</u>	<u>75% Ferrosilicon</u>	<u>Silicon Metal</u>
September 3	46.0-50.0	42.0-43.0	53.0-54.0
September 10	46.0-50.0	42.0-43.0	52.0-53.0
September 17	46.0-50.0	40.5-42.5	50.0-51.0
September 24	46.0-50.0	40.5-41.5	50.0-51.0

TABLE 1
U.S. PRODUCTION, SHIPMENTS, AND PRODUCER STOCKS OF SILICON ALLOYS AND METAL 1/ 2/ 3/

(Metric tons)

Material	Gross production 4/		Net shipments		Stocks September 30, 1999
	September 1999	Year to date	September 1999	Year to date	
Ferrosilicon:					
25%-55% silicon 5/	16,700	191,000	14,000	135,000	45,800
56%-95% silicon	11,500	105,000	8,180	102,000	28,300
Silicon metal:					
Excludes semiconductor grades	15,400	146,000	15,000	144,000	6,700

1/ Data are rounded to three significant digits.

2/ Includes U.S. Geological Survey estimates.

3/ Data for silvery pig iron (less than 25% silicon) withheld to avoid disclosing company proprietary data.

4/ Ferrosilicon production includes material consumed in the production of miscellaneous silicon alloys.

5/ Includes miscellaneous silicon alloys.

TABLE 2
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN AUGUST 1999 1/ 2/

(Metric tons)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Ferrosilicon:						
More than 55% silicon:						
Canada	345	207	\$225,000	3,670	2,200	\$2,300,000
Costa Rica	--	--	--	3	2	2,810
Dominican Republic	--	--	--	19	11	21,900
Japan	--	--	--	5	3	3,880
Korea, Republic of	47	28	46,500	1,560	936	1,340,000
Malaysia	5	4	5,880	5	4	5,880
Mexico	65	42	91,800	2,240	1,410	2,250,000
United Kingdom	--	--	--	15	9	28,800
Total	463	281	370,000	7,510	4,570	5,950,000
Other ferrosilicon:						
Belgium	223	111	176,000	2,020	1,010	2,190,000
Canada	517	259	306,000	4,380	2,190	2,980,000
China	47	24	37,400	747	374	590,000
Germany	16	9	28,100	475	240	498,000
India	575	287	652,000	3,410	1,710	2,910,000
Japan	958	479	762,000	7,610	3,800	6,350,000
Korea, Republic of	--	--	--	1,480	739	1,170,000
Mexico	115	57	144,000	856	428	1,060,000
Taiwan	--	--	--	491	245	388,000
United Kingdom	190	95	135,000	1,700	851	1,270,000
Other (13 countries)	97	48	76,500	681	341	586,000
Total	2,740	1,370	2,320,000	23,900	11,900	20,000,000
Total ferrosilicon	3,200	1,650	2,690,000	31,400	16,500	25,900,000
Metal:						
More than 99.99 % silicon:						
China	14	XX	266,000	98	XX	3,690,000
Czech Republic	17	XX	775,000	29	XX	1,330,000
France	18	XX	280,000	24	XX	626,000
Germany	(3/)	XX	21,800	15	XX	1,100,000
Japan	206	XX	13,100,000	1,350	XX	83,700,000
Korea, Republic of	63	XX	1,420,000	368	XX	11,000,000
Malaysia	14	XX	2,860,000	87	XX	18,500,000
Poland	7	XX	306,000	25	XX	1,220,000
Taiwan	23	XX	419,000	97	XX	6,030,000
United Kingdom	4	XX	888,000	29	XX	6,790,000
Other (39 countries)	8	XX	539,000	72	XX	4,440,000
Total	375	375 e/	20,900,000	2,190	2,190 e/	138,000,000

See footnotes at end of table.

TABLE 2--Continued
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN AUGUST 1999 1/ 2/

(Metric tons)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Metal--Continued:						
99.00% - 99.99% silicon:						
Australia	--	--	--	2	2	\$3,000
Bahamas, The	1	1	\$6,400	1	1	6,400
Belgium	--	--	--	6	6	8,290
Germany	2	2	3,470	5	5	6,970
Japan	--	--	--	141	140	206,000
Mexico	6	6	9,310	11	11	17,200
Spain	3	3	3,600	7	7	9,300
Sweden	2	2	3,320	2	2	3,320
United Kingdom	--	--	--	3	3	3,960
Total	14	14	26,100	178	176	264,000
Other silicon:						
Argentina	--	--	--	72	70	95,200
Belgium	--	--	--	45	44	73,700
Canada	815	792	816,000	5,840	5,670	5,860,000
China	5	5	7,200	26	25	38,300
Dominican Republic	--	--	--	25	24	108,000
Germany	413	401	545,000	586	569	811,000
Japan	310	301	779,000	2,830	2,750	5,910,000
Korea, Republic of	2	2	5,730	94	91	189,000
Mexico	221	215	384,000	17,100	16,600	23,100,000
Taiwan	2	2	3,210	898	872	1,190,000
Other (22 countries)	11	11	25,800	164	159	484,000
Total	1,780	1,730	2,570,000	27,700	26,900	37,800,000
Total silicon metal	2,170	2,120	23,500,000	30,000	29,200	176,000,000

e/ Estimated. XX Not applicable.

1/ Presentation of monthly data is based on the year-to-date quantities (gross weight) of the top ten countries.

2/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN AUGUST 1999 1/ 2/

(Metric tons)

Country	Gross weight	Contained weight	Value	Year to date p/ 3/		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55% - 80% silicon, over 3% Ca:						
Argentina	--	--	--	120	73	\$148,000
Brazil	--	--	--	20	13	23,300
France	36 4/	13 4/	\$58,400 4/	54	19	87,400
Macedonia	--	--	--	10,700	8,130	5,840,000
United Kingdom	10	7	75,900	10	7	75,900
Total	46	20	134,000	10,900	8,240	6,180,000
55% - 80% silicon, Other:						
Brazil	--	--	--	4,720	3,540	2,670,000
Canada	866	659	644,000	4,790	3,620	3,570,000
Egypt	--	--	--	2,610	1,900	1,430,000
France	314	211	647,000	1,110	735	2,240,000
Germany	30	23	156,000	285	214	1,250,000
Iceland	--	--	--	11,600	8,700	6,200,000
India	385	292	237,000	770	583	475,000
Norway	14,300	10,800	8,920,000	62,800	47,700	39,500,000
Poland	--	--	--	2,460	1,850	1,490,000
South Africa	3,090	2,320	1,710,000	23,600	18,000	13,600,000
Other (5 countries)	2	1	8,260	722	475	1,070,000
Total	19,000	14,300	12,300,000	115,000	87,300	73,400,000

See footnotes at end of table.

TABLE 3--Continued
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN AUGUST 1999 1/ 2/

(Metric tons)

Country	Gross weight	Contained weight	Value	Year to date p/ 3/		
				Gross weight	Contained weight	Value
Ferrosilicon--Continued:						
80% - 90% silicon:						
Canada	--	--	--	73	65	\$5,830
Total	--	--	--	73	65	5,830
More than 90% silicon:						
Canada	--	--	--	17	17	24,700
Total	--	--	--	17	17	24,700
Magnesium ferrosilicon:						
Argentina	120	58	\$98,600	644	307	600,000
Brazil	543	242	416,000	2,440	1,110	1,810,000
Canada	117	57	90,200	254	122	234,000
China	60	29	50,300	2,720	1,300	2,120,000
Japan	--	--	--	79	39	184,000
Norway	1,610	740	1,610,000	9,500	4,590	9,320,000
Total	2,450	1,120	2,270,000	15,600	7,470	14,300,000
Other ferrosilicon:						
Canada	823	260	617,000	6,280	2,170	5,060,000
France	--	--	--	81	41	191,000
Germany	--	--	--	80	12	102,000
Italy	92 4/	8 4/	32,400 4/	129	12	45,400
Japan	--	--	--	30	10	64,100
Norway	--	--	--	182	90	243,000
South Africa	--	--	--	111	16	97,900
Total	915	269	650,000	6,900	2,350	5,810,000
Total ferrosilicon	22,400	15,700	15,400,000	149,000	105,000	99,700,000
Metal:						
More than 99.99% silicon:						
Canada	--	XX	--	1	XX	44,400
China	--	XX	--	1	XX	2,420
Denmark	(5/)	XX	19,300	1	XX	50,400
Germany	24	XX	5,140,000	265	XX	31,800,000
Italy	25	XX	1,160,000	379	XX	17,100,000
Japan	32	XX	1,010,000	335	XX	10,400,000
Korea, Republic of	5	XX	122,000	39	XX	840,000
Sweden	--	XX	--	1	XX	54,000
Taiwan	--	XX	--	29	XX	363,000
United Kingdom	4	XX	11,100	11	XX	1,130,000
Other (7 countries)	(5/)	XX	11,300	1	XX	102,000
Total	91	91 e/	7,470,000	1,060	1,060 e/	61,900,000
99.00% - 99.99% silicon:						
Australia	174	173	226,000	950	944	1,310,000
Brazil	2,190	2,180	2,650,000	7,330	6,720	8,870,000
Canada	1,530	1,510	2,280,000	9,110	9,040	13,800,000
China	180	179	164,000	617	556	566,000
France	--	--	--	962	955	1,300,000
Norway	18	18	51,500	4,300	4,300	6,150,000
Russia	1,470	1,460	1,380,000	3,350	3,260	3,720,000
Saudi Arabia	367	364	346,000	1,330	1,320	1,270,000
South Africa	1,640 4/	1,580 4/	1,880,000 4/	11,100	11,000	13,800,000
Ukraine	--	--	--	280	278	323,000
Other (6 countries)	70	63	93,800	481	434	825,000
Total	7,640	7,530	9,080,000	39,800	38,800	51,900,000
Other silicon:						
Brazil	--	--	--	1,240	742	1,820,000
Canada	719	711	990,000	6,750	6,630	9,660,000
China	337	332	282,000	1,480	1,460	1,280,000
Norway	--	--	--	344	334	338,000
Philippines	--	--	--	241	237	248,000
Russia	1,530	1,470	1,390,000	11,500	11,200	12,200,000
Saudi Arabia	1,180	1,160	967,000	9,320	9,110	9,430,000

See footnotes at end of table.

TABLE 3--Continued
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN AUGUST 1999 1/ 2/

(Metric tons)

Country	Gross weight	Contained weight	Value	Year to date p/ 3/		
				Gross weight	Contained weight	Value
Metal--Continued:						
Other silicon--Continued:						
South Africa	308	300	\$270,000	3,660	3,580	\$3,700,000
Spain	--	--	--	282	278	357,000
United Kingdom	38	37	49,200	245	237	329,000
Other (7 countries)	71	71	91,000	495	427	586,000
Total	4,180	4,080	4,040,000	35,500	34,200	39,700,000
Total silicon metal	11,900	11,700	20,600,000	76,400	74,100	154,000,000

e/ Estimated. p/ Preliminary. XX Not applicable.

1/ Presentation of monthly data is based on the year-to-date quantities (gross weight) of the top ten countries.

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ May include revisions to previous months' data.

4/ All or part of these data have been referred to the Bureau of the Census for verification.

5/ Less than 1/2 unit.

Source: Bureau of the Census.